Management Control and Value-based Management: Compatible or not?

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MANAGEMENT CONTROL AND VALUE-BASED MANAGEMENT: COMPATIBLE OR NOT?

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ABSTRACT

This paper elaborates on the effects of Value-based Management (VBM) on the Management Control System in three Dutch (multinational) organizations.

The cases show that communication about the rationale of VBM and how it affects activities and decisions are more relevant for acceptance, than a metric-approach in which the calculations are explained into detail. In that view, other tools are used, such as Balanced Scorecards, value trees, or Activity-based Costing, while involving all functions throughout the entire organization, such as strategy, human resources, and production.

What seems to be most important is that target setting, remuneration and rewarding are aligned with the value drivers, holding people accountable for the activities they control.

1. INTRODUCTION

Lots of literature about Value-based Management (VBM) has been published in the last decade. Much of this relates to VBM-metrics and its

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assumed correlation with share price, as contributing to Shareholder Value Creation (e.g., Stewart, 1991; Biddle, Bowen, & Wallace, 1997, 1999). Other substantial research has been devoted to implementation of VBM and its effects on the corporate level (Armitage & Jog, 1999; Wallace, 1997; Haspeslagh, Boulos, & Noda, 2001). A third stream that can be distinguished is about the assumed conflict between the shareholder and stakeholder view on the firm (Jensen, 2001; Wallace, 2003).

However, only little research has been conducted on how the organization is affected with the implementation of VBM (Malmi & Ikäheimo, 2003). Especially, how VBM is implemented at lower hierarchical levels and how it specifically affects the management Control System, seems to be an unexplored field (Young & Selto, 1991; Langfield-Smith, 1997; Ittner & Larcker, 2001; Marginson, 2002). This paper will therefore elaborate on these issues, by means of describing the adoption and implementation of VBM in three Dutch organizations and how it affected their existing Management Control Systems. For these three organizations, the following issues will be addressed:

1. Why did the organization implement VBM?
2. How was VBM implemented?
3. How did VBM affect management control?
4. What were the effects of managing for value?

First it is necessary to have a clear description of what VBM is, and what definition will be used when talking about VBM in this paper. Rappaport (1986), Stewart (1991), McTaggert, Kontes, and Mankins (1994), Weissenrieder (1997), Arnold (1998), Copeland, Koller, and Murrin (2000), and Young and O'Byrne (2001), among many others, provide descriptions and definitions of VBM. When looking at these, four important aspects relating to VBM can be distilled:

- The first aspect of VBM, and basically the distinguishing characteristic of VBM compared to traditional performance management, is the cost of capital. Where net profits only include the cost of debt (interest), value is created when both costs for debt as well as for equity are covered.
- Second, the purpose is to create economic value (rather than maximizing accounting profits), based on the notion of residual income, which states that wealth is created only when a company covers all operating costs and the cost of capital (Hicks, 1946).
- Third, VBM is a managerial approach, meaning that applying VBM is not restricted to calculating the created value. It is an approach where many

techniques, concepts, and tools are used to meet the firm's objectives, relating to all organizational functional areas (e.g., production, logistics, strategy, finance, accounting, and human resources) and levels.

- Fourth, the VBM system is built around value drivers. This stresses the fact again that it is not about the calculation (e.g., Haspeslagh et al., 2001), but about the activities that are related to the variables of the calculation. These activities can be expressed in both financial and non-financial terms, and involve all organizational levels. Ways to operationalize this 'break-down' is by using for example the Balanced Scorecard or a 'value tree.'[1]

Based on these aspects, I will define VBM as:

> Value-based Management is a managerial approach to manage a company by focusing on the key value drivers in order to create value by investing in projects exceeding the cost of capital.

Regarding management control, I will use Anthony and Govindarajan's (2001) definition, as this definition best follows the aspects to consider as mentioned above regarding VBM. They describe the activities that are involved with management control as follows (Anthony & Govindarajan, 2001, pp. 6–7): (1) planning what the organization should do, (2) coordinating the activities of several parts of the organization, (3) communicating information, (4) evaluating information, (5) deciding what, if any, action should be taken, and (6) influencing people to change their behavior. Moreover, they state that 'management controls are only one of the tools managers use in implementing desired strategies,' besides organization structure, human resources management, and culture (p. 8). This leads to Anthony and Govindarajan's definition of management control: 'the process by which managers influence other members of the organization to implement the organization's strategies' (Anthony & Govindarajan, 2004, p. 7). This definition emphasizes that Management Control is largely about influencing behavior, which is exactly what needs to be focused on upon implementing VBM (e.g., Haspeslagh et al., 2001; Wallace, 1997).

In order to obtain the necessary information for the three case studies, I interviewed corporate executives who were involved with the introduction and implementation of VBM from a corporate perspective, and in addition lower-level executives, whose activities should have been affected as a result of managing for value. This way, a comprehensive picture was obtained of the purposes and effects when firms decided to apply VBM, in order to learn how VBM was implemented to lower hierarchical levels and how it specifically affected the Management Control Systems.

This paper is organized as follows. In the next section, I will introduce the three case companies, followed by the reasons why they implemented VBM. In the subsequent sections, I will respectively focus on the implementation, management control systems, and the effects of managing for value on behavior, decision making and performance, by comparing the three organizations. The paper ends with conclusions and directions for future research.

2. INTRODUCTION TO CASE COMPANIES

This section introduces the three organization that are subject of this study.

2.1. Akzo Nobel N.V. (from now on: Akzo Nobel)

Akzo Nobel is a diversified multicultural group of companies with activities in pharmaceuticals, coatings, and chemicals. They develop a competitive advantage by combining the focus and entrepreneurial spirit of a decentralized business unit organization with the scale and power of a corporate center that provides access to global capital markets, managerial talent, and best practice management processes. In 2004, total net sales amounted EUR 12.7 billion. The three groups contributed to the realization of these sales as follows: Pharma 25%, Coatings 41%, Chemicals 34%.

In 1993 the organizational structure of Akzo Nobel was changed, resulting in new corporate staff departments and the adaptation of the employee participation structure in the Netherlands. Former division offices and corporate offices were integrated in order to effect a higher level of decentralization. At that point, the two-layer organization model turned more visible. Applying this structure effectively, Akzo Nobel's widespread activities were attributed to business units that report directly to the Board of Management. The business units had such delegated authorities that they could adequately and quickly respond to market developments. In turn, the business units were clustered into so-called Groups (i.e., Chemicals, Coatings, and Pharma). The General Managers were responsible for the performance of their business units. To safeguard consistency and coherence for the total organization, corporate directives had been established by the board of management. At the corporate level, certain functions were centralized in order to execute a coherent policy, e.g., regarding administration and control, finance, human resources, legal affairs, strategy and technology.

In the 1999 annual report, Akzo Nobel made its value-driven management explicit for the first time (p. 21):

> Our ambition in the year 2000 is to make a further shift to value creation as the driving force for our businesses.

2.2. Heijmans N.V. (from now on: Heijmans)

Heijmans is a leading Dutch construction and property development company. Aspiring to operate as a full-service construction and property development company, Heijmans focuses on all of the activities in the value chain, from consultancy services and design to maintenance and management. By 2008, Heijmans aims to realize approximately 35% of its income from operations concerned with the preliminary stages (consultancy services, design and development), approximately 45% in the construction phase and approximately 20% in the follow-up phase (service, maintenance and management).

In 1972, the company changed its legal structure from a public company into a holding company with operating companies, which were part of product/market-based divisions. Upon this reorganization, all fixed assets were centralized in a Central Facility Company. When needed, the operating companies could rent the necessary equipment and machinery. This way, operating companies effectively had no capital, besides occasionally buildings.

In September 1993 Heijmans entered the capital market when their shares were listed on the Amsterdam Exchanges (Midkap funds). The listing was necessary to raise funds for financing acquisitions, and maintaining a sound solvency in order to secure independency (avoiding a hostile takeover or strict supervision by banks).

On January 1st, 1995, Joop Janssen took office as Chairman of the Board of Management. In the 1996 Annual Report he mentioned in the paragraph on risks and risk control, that (p. 14):

> growth should again be accompanied with an increase in profitability per share and an increase in the economic value added. That way, the objective of increasing the value of the company for the shareholders can be achieved.

2.3. Schiphol Group N.V. (from now on: Schiphol)

Schiphol is an airport operator. The company's mission is to create sustainable value for its stakeholders by creating and developing AirportCities[2] and by positioning Amsterdam Airport Schiphol as the leading AirportCity.

Since 1958 Schiphol is a privately owned company, although shares are distributed among the Dutch state (75.8%), the municipality of Amsterdam (21.8%), and the municipality of Rotterdam (2.4%). Over half of Schiphol's turnover (EUR 888 million over 2004) is derived from airport fees. Other revenues are generated by concessions, parking fees and real estate as well as participating interests. These sources of revenue are based on the company's four Business Areas of Aviation, Consumers, Real Estate and Alliances and Participations.

In 1997 Schiphol set out new corporate objectives. Core of this new, *market*-based strategy was to develop Schiphol into a customer-focused and innovating airport, where various means of transportation come together and which is attractive for transfers. For that reason, responsibilities and authority were decentralized to business units.

At that time, Schiphol also explicitly articulated that privatization would be most desirable in order to achieve their new organizational objectives. They felt, as stated in the 1997 annual report, that 'privatization allows us opportunities to operate in a different way financially' (p. 11). A smaller state's stake would give the organization better access to capital markets to raise funds for future activities. Besides, opportunities would arise for alliances and participations by means of exchanging shares. Therefore, Schiphol started an Investor Relations program as of 1998 to strengthen the ties with their financial stakeholders and potential investors.[3]

After the new structure went into effect as of January 1, 1998, the newly appointed CFO and corporate controller both wanted the financial management of the business units to show what was effectively earned in economic terms.

3. REASONS FOR IMPLEMENTING VALUE-BASED MANAGEMENT

After the brief introductions to the companies in the previous section, I now continue with the reasons why these organizations implemented VBM. In analyzing these reasons, a distinction will be made between external and internal reasons.

3.1. External Reasons

From an external point of view, capital markets had an important stake in deciding to manage for value. As a result of increased pressure, mainly due

to acquisitions, Akzo Nobel and Heijmans realized they needed to obtain a sharper focus on capital use. Akzo Nobel described this as follows in their 2000 annual report (p. 6):

> We measure value creation today in terms of Economic Value Added (EVA), a concept we are currently introducing throughout the Company. It should improve capital productivity, have a positive effect on shareholder value, and better reflect today's thinking on value creation.

Heijmans' Finance Director told in this respect: 'An important part of invested capital is working capital. Reduction of working capital has a number of positive advantages, among others, lower costs of capital. A strong focus on EVA will be necessary in order to securely stay in the drivers' seat, rather than the banks taking over control.'

One of the main reasons for Heijmans to adopt VBM was for communication toward the stock exchange. The corporate executives interviewed, though, were aware of the fact that the link between EVA and share price is questioned. Heijmans had been renowned for its external communication, ever since its initial listing on the Dutch Stock Exchange (in 1993).[4] However, the listing introduced the capital market as a serious stakeholder in the company. The 1997 annual report, covering the year in which VBM was implemented, stated in that respect (p. 13):

> Recent discussions, among others resulting from the investigation of the commission corporate governance, focus the attention of Dutch companies mainly towards capital providers. Starting point in that view is that managing for shareholder value will guarantee that in the long run, besides shareholders, also other stakeholders will maximize their value.

The impact of the capital market on Schiphol's decision to implement VBM related to the potential initial public offering. Since Schiphol reasoned that the capital market also required a rate of return on the money the shareholders put in the organization, according to management VBM was a logical consequence. Consequent stakeholders to a privatization, such as investment banking analysts, were in management's opinion increasingly interested in how value is created. Schiphol's management perceived to have an adequate answer to value-related questions in VBM.

A more specific external reason for implementing VBM at Schiphol was based on the pricing mechanism for airport tariffs that exists as imposed by the government and the Dutch Competition Authority (*Nederlandse Mededingingsautoriteit* – NMa). This mechanism implies that Schiphol needs to discuss their tariffs with the government and the NMa, who allow Schiphol to make a certain rate of return on their aviation-activities, which

is included in the Dutch Aviation Act ('*Luchtvaartwet*'). The NMa requires therefore that the accounting systems are able to identify *Aviation* activities and transactions. A former corporate controller states that 'VBM is a necessary tool to confront the authorities, NMa, and airlines, in order to defend proposed tariffs.'

Regarding the stock market, Akzo Nobel noticed that their share price lagged the market index. This was a sign that the firm might become a target for a (hostile) takeover, fueling the urge to keep a closer eye on corporate performance. From that perspective, a sub-business unit controller was of the opinion that the most important reason to implement EVA was to link Capital with the Profit & Loss account. As he stated, 'EVA is a logical link between these two blocks, therefore making it easier to explain why there was such pressure on working capital and investments.'

3.2. Internal Reasons

This last external reason links to the reasons of implementing VBM from an internal perspective. By means of VBM, Akzo Nobel encouraged entrepreneurial behavior, since all business units have a very high level of autonomy. Managing for value was, according to Akzo Nobel, a solid push in the back to accomplish a change of mindset among management and employees to behave like owners, and manage the company at the lowest possible costs, including the cost of capital.

This thought was reinstated by Heijmans, who pursued to create awareness for working capital, more specifically accounts receivable, inventory, and accounts payable. Since Heijmans emphasized working capital when talking about VBM, it was often referred to as 'working capital management' rather than EVA.

Schiphol's activities require high investments, resulting in questions of how much returns these investments actually yield. VBM provided the required insight into the true profitability of investments, given the fact it takes considerations into account that the traditional investment analyses did not, while having a significant impact on these investments, such as asset allocations and its methods and the capital charge.

Besides, Schiphol felt the desire for implementing one single management system that would align external and internal reporting and control, instead of having different systems providing different information. This way, everybody who contributed to VBM and was held accountable for (parts of) it could see that a consistent system was used with one single 'database' feeding the reporting and performance management system. The Oracle

system that replaced SAP in 1997 provided the necessary data warehousing function, while the new information architecture allowed reporting on different dimensions.

In order to meet the NMa's requirement to explicitly distinguish aviation activities (costs) from the other activities, the 2000 annual report described a new organizational structure as follows (p. 19):

> Schiphol Group's strategy is increasingly directed at commercial services for end-consumers.
>
> To manage such diversification, Schiphol Group uses a matrix structure with operational business units and a division into product-market combinations (PMCs). These PMCs are categorized according to four Business areas: Aviation, Consumers, Real Estate and Alliances & Participations. In 2000, the necessary basis was established to bring the accountability structure in line with the adapted business model.

Appendix 1 summarizes the reasons for implementation.

4. IMPLEMENTATION OF VALUE-BASED MANAGEMENT

This section describes the key characteristics in the implementation of VBM.

Table 1 first provides a brief overview of the metrics the organizations applied when implementing VBM in expressing economic value creation.

4.1. Akzo Nobel

Regarding implementation, Akzo Nobel put in considerable time and effort to train management, who were subsequently responsible for implementing VBM in their unit. After initially given complete own responsibility, it soon became apparent that such freedom did not contribute to a successful implementation. In order to have more effective communication throughout the company and have one office for all EVA matters to help and support the business units, the position of 'EVA coordinator' was introduced in 2001. This EVA coordinator, among other things, set up an intranet site where all employees can post questions or look for information, developed a 'drivers game' to gain insight into the effects of different kinds of decisions on EVA, organized 'value seminars' where people from different business units meet and hear and discuss about issues relating to EVA, and drew up a brochure for all employees in plain, non-technical, language.

Table 1. VBM Metrics.

	Akzo Nobel	Heijmans	Schiphol
As of year	2000	1997	1999
Metric	EVA	EVA	Return on Net Assets/Economic Profit
Adjustments	• Taxes • Major Investment Relief[a] • Exceptionals • Off-balance sheet items • Cash • Pensions	• Goodwill • Taxes • Leasing Differences in EVA definitions exist between divisions.	None
Cost of capital	One corporate WACC	Initially WACC per division; per 2002 one corporate WACC	Initially WACC per business area; per 2002 one corporate WACC; as of 2005 WACC per business area for internal purposes

[a]The Major Investment Relief (MIR) is introduced to avoid rejection of capital-intensive investments, that in the first years yield negative EVAs, and as a consequence would discourage managers to invest in such projects. With the MIR, the negative EVAs of maximally the first three years are capitalized into the future. Hence, managers are basically 'exempted' from the first three years of negative EVAs in their performance.

From the start in 2001, Akzo Nobel linked remuneration incentives with value creation, initially for higher management. As of 2003, the EVA performance was linked to the bonuses of all Dutch employees, while the impact of the bonus ranged in percentage with respect to the hierarchical level. This variable percentage related only to executives, and increased with the level of executive (links to area of responsibility, or function). The widespread link ensured a change in mindset to use capital efficiently among all employees, instead of restricting this understanding only to higher managerial levels. Since the new incentive plan involved all employees, unions were informed about the system and agreed to its implementation.

4.2. Heijmans

Heijmans also contributed considerable time and effort in implementing VBM. In training programs, VBM was included in the Finance part of such

programs as last module. That way, it was shown that VBM was an all-encompassing instrument that involved all other disciplines, like human resources, strategy, and marketing. Or, as a division executive tells: 'Eventually, all the pieces of the program fit together in EVA.'

Similar to the early implementation of EVA at Akzo Nobel, no effective communication between business units existed. For instance, one of the divisions developed a value tree. The division executive said: 'This is a sheet that is shown at courses and which is understandable, compared to talking about Stern Stewart's 160 possible adjustments. Discussions should not be centered around the calculations, but around the concepts. That way, employees know that they need to create value, rather than have to pay investors. With a value tree, this awareness is immediately born.'

However, a problem that Heijmans experienced, was that different definitions were used between corporate EVA reporting (like in the annual report) and the divisions. Reason behind these differences were that the divisions were of the opinion that the 'standard' (corporate) EVA model required some adjustments in order to be better applicable given the division's specific circumstances in which it operates. According to all executives interviewed, though, it should be both possible and desirable to have a uniform system.

Nevertheless, EVA never really gained foothold at lower levels in the organization since no consequences were linked to EVA-performances (neither in financial nor non-financial gains, such as bonuses or promotions).

4.3. Schiphol

Main point when implementing VBM at Schiphol was to stress that it not only provided shareholder value creation, but also took notice of other aspects, as included in the so-called Diamond (to be discussed in the next section, about control). In the early years, VBM was extensively used in the areas of investment decisions as well as operational management. However, as a result of the mandatory restructuring due to the NMa's requirement of distinction in costs for aviation activities and others, the organizational responsibilities became rather complex and attention for VBM deteriorated. The organization was restructured to administrative business *areas* and physical business *units*, compared to only having business units before. A business unit controller told: 'This construction is more aimed at making the calculations, rather than control the organization.' Schiphol's managing board made this distinction even more profound: the Chief Financial Officer (CFO) was more focused on (the administrative) Business Areas, which need

to create value, while the Chief Operating Officer (COO) was more aimed at (the physical) Business Units for organizational planning and control.

However, by 2003–2004 VBM regained attention. One of the reasons for this 'resurrection' was that Schiphol was redesigning its business processes to bridge the gap between business *areas* and business *units*. This enabled management (at all levels) to catch the concepts or refurbish its understanding of VBM by means of a new training schedule aimed at explaining the thoughts behind the system and the eventual effects on economic value when acting alike. That way, a former corporate controller claimed, business processes throughout the organization would be better aligned, while it also improved internalization of VBM in the mindsets of people and procedures to be followed. Or, as the former corporate controller put it: 'If you want people being held accountable for RONA, you should also manage on RONA, hence see to it that everybody understands the system to improve that measure.'

The highest management levels (Managing Board and Business Unit management) had targets defined in VBM terms, whereas other performance criteria differed between individuals (such as customer satisfaction and improving the purchasing procedure).

Appendix 2 summarizes the key characteristics of the implementation at the three organizations.

5. VALUE-BASED MANAGEMENT AND THE MANAGEMENT CONTROL SYSTEM

This section describes the characteristics of the management control systems of the companies when managing for value.

5.1. Akzo Nobel

Akzo Nobel is aware of the fact that EVA is a historical measure, and for that reason managing is based on the change in EVA rather than absolute EVAs. Although the Corporate center is informed monthly about the business units' performances, formal presentations of results take place once every quarter. These are based on EVA and grounded on the performance of the last quarter, and the expected performance for the next three quarters. Next to EVA, the presentations contain other ratios, since these can be more or less considered as value drivers, as suggested by the EVA coordinator. In the last quarter of each year, a three-year strategic plan needs to be submitted.

On sub-business unit level, application of traditional budgets are common practice. Starting point in these budgeting processes is not that the EVA must improve and subsequently plans are made to realize that, but that BU management has a plan in mind, and the impact on EVA is considered. Therefore, sales and profits are starting point, in a bottom-up process within the organization.

Since EVA targets are determined top-down, from a corporate target, down to group target, and subsequently to business unit target, the sub-business units budgets do need to be aligned with the BU's EVA target. Despite the tight corporate financial control, business units have their own responsibility to develop strategies in meeting their targets, as outlined in the three-year strategic plan.

In realizing working capital reduction, Akzo Nobel started using 'consignment stocks' around 2003. These are inventory that are physically present at Akzo Nobel's production sites, although they are still the supplier's possession. Although no part of Akzo Nobel's working capital, they are at their direct disposal. This system is used in the Netherlands and Italy, and will be introduced in Spain and Sweden. The moment Akzo Nobel uses the materials, it is booked and invoiced. Just-in-time delivery appeared to be too risky, for example as a result of traffic. With this system, Akzo Nobel faces less risks, since the supplier looks after the inventory, the inventory levels, guarantees availability, and invoices when used, while the same terms for payment apply.

In the case of the Coatings sub-business unit Italy, financial overviews have a uniform format for all areas, including figures from the previous quarter and 'year-to-date' figures, comprising budgeted amounts, amounts of the previous year, and actuals for this year. This overview also gives, for example, the average net price per liter paint. This way, an internal benchmark is created resulting in exceptions to be noticed immediately, for which the managers are expected to give an explanation. Advantage of this system is that two flows come together: area operating income, where taxes are subtracted, and capital (specifically total working capital: inventory and accounts receivable with a separation between paid/not to be paid). The overviews sec are not the result of the implementation of EVA, but the fact that the amounts on the overviews can now be traced back to details is specifically added for EVA purposes.

5.2. Heijmans

Heijmans' growth targets have for many years been communicated in terms of turnover and profits, and are therefore the two prime financial indicators.

As a consequence, focus within the organization is on the Profit and Loss accounts. According to the corporate executives interviewed, another reason for the remaining focus on P/L is that employees are not held accountable for EVA, albeit that the calculations are made for each division. This lack of EVA accountability, the corporate executives think, may be partly due to a missing link in alignment between value creation and remuneration.

In executing the strategy, Heijmans leaves the divisions and operating companies full autonomy in using instruments and tools like the Balanced Scorecard. A division director says: 'You can see that with EVA in conjunction with the BSC a few things come together. What counts to reach a final financial result are the indicators in the BSC, and those are the key value drivers. You see the financial results by means of the EVA and the indicators in the BSC jointly developing. This is how the operating companies are managed and it starts to pay off.' The division director realizes that EVA is a historical measure, and that is some problem. In his view, companies therefore need to look at other parameters/measures where EVA is grounded on. According to the Finance Director, the use of instruments depend on the people who are in charge and their interests.

Division management tries to pick the best pieces from operational management to share these with other operating companies. For example, if an operating company has a good time schedule or system for controlling their accounts receivable, this is communicated to the other operating companies. Besides, companies do help each other if they find out someone has a problem. As a division director said: 'First they laugh with each other if an operating company has high accounts receivable outstanding, but now it gradually grows to solve such problems in a joint effort.'

As a result of internal discussions, the assets of the Central Facility Company (CFC) are not allocated to the divisions/operating companies effectively using the assets. CFC remains therefore regarded as a separate entity with their own EVA responsibility. The rent is expensed on the operating companies' profit and loss accounts using the assets, while reported as revenues on CFC's profit and loss account.

Although the ambitions are present, other priorities (e.g., implementation of a new company-wide consolidation software package and IFRS) did not allow corporate management gaining a stronger internal focus on EVA by means of a uniform outlay for EVA with uniform definitions. Besides, the corporate executives expect discussions about the allocated costs from the Holding to the divisions, and the calculations of the weighted average cost of capital (WACC). They wonder what value such discussions add to the application of VBM in the divisions.

Focusing on EVA/VBM has not been on its name as such, but more on working capital, an important value driver in the construction industry. Targets are aimed at underlying value drivers, e.g., invested capital and accounts receivable outstanding.

5.3. Schiphol

For control purposes Schiphol developed its 'Diamond.'[5] This tool includes both financial and non-financial measures on a fourfold perspectives: 'Financial,' 'Quality,' 'Sustainability and Innovation,' and 'Employees and Organization.'

'Cutting' the Diamond is based on responsibilities and accountability. First, the financial indicators for the Diamond are determined by the executive board on corporate level, and subsequently derived to business *area* (BA) and business *unit* (BU) level. The operational indicators in the Diamond are developed the other way round, starting at the business *unit*-level. The business units set their operational indicators and targets, in order to meet the financial targets. The business units' indicators are based on its operational departments, with performance indicators like for example occupancy rate in letting office property square meters, revenues of parkings, concessions for shops in the terminals, and on-time departures of airplanes. The business units' Diamonds are subsequently used to build the Diamond on business *area* level, and the corporate Diamond. Financial indicators therefore follow a top-down approach, whereas operational indicators flow bottom-up. Appendix 3 includes an adapted example of the Diamond.[6]

On operational level, neither a separate Diamond is implemented, nor EP/RONA is calculated. As a business unit controller told: 'due to insufficient controllability on assets, and thus its accountability on the capital charge.' These operational departments' indicators are focused on their specific operational activities that are within their control, but are not formalized in a management control system. A business unit controller stated that she 'does not feel that the management control system should be organized that way, since these detailed schemes are not used anyway.' In this same fashion, she 'does not consider it to be important to have a value tree, once you know the business.' She continued: 'A project has started to improve Schiphol's planning and control cycle. In this new cycle, strategy must qualitatively be improved to make it more activity-directed, where in turn these activities are translated into the financial model, because that is currently no more than a separate calculus exercise. Subsequently, a clear link must be established between strategy and budgets.'

Until 2005, BU Management Teams were held responsible for P/L, although BU directors were also held responsible and accountable for RONA. This system ascertained that interests at managerial levels were aligned on creating economic profit, but that managers were held accountable for the activities they carry responsibility for. Only the BU director could be held directly accountable for a RONA, while the other members of the management teams were only responsible for their part of the BU, was the reasoning.

The consequence of the fact that control was based on two grounds (BAs, only administrative, without management, and BUs), resulted in a model that was in place to be used for the five-year planning, built upon a VBM analysis, but which was considered to be a black box to everybody, said a business unit controller. The Schiphol organization was based on processes, which did not by definition need to equal how Schiphol approached the market. Therefore, external and internal control were not aligned. For instance, the terminals are primarily built for passenger transfers, but also house shops, stores and other concessionaires. Since these activities related to different PMCs and BAs, allocation (both costs and assets) was a very complex exercise. As of 2004, however, allocations are effected directly by the information system (Oracle), which was also required by the NMa. Since these allocations take place by means of journal entries in the bookkeeping system, it also forced Schiphol to describe clear and transparent procedures.

To solve the misalignment in control, as of 2005 business *units* are abandoned, and departments are directly linked to business *areas*, whose entire management is EP/RONA responsible.

Appendix 4 shows the key control characteristics how these organizations manage for value.

6. EFFECTS ON BEHAVIOR, DECISION MAKING AND PERFORMANCE

This section will look into the effects on behavior, decision making and performance, now these companies manage for value.

6.1. Akzo Nobel

With introducing EVA, Akzo Nobel also introduced a consistent focus and common language over all business units, compared to a range of

different measures that were used in the pre-VBM era (e.g., ROI, ROS). As a consequence, more attention is paid to (working) capital, in order to achieve 'profitable growth and sustainable profits.'[7]

Regarding allocation of resources, the effects are best described in the 2004 annual report (p. 10):

> We regularly evaluate the added value of the composition of our portfolio in a pragmatic way, driven by our value creation principle. As in the past, we will not shy away from bold moves.

The sub-business unit director experienced that EVA resulted in a higher awareness for the balance sheet, with the consequence that decisions are often scrutinized for its effects on the EVA. However, he never saw the statement again which was called when rolling out EVA, that 'Capital is plenty available, but it is expensive.' In his view, even a good project is hard to be approved.

In this similar light, the EVA coordinator told that production and site rationalization also became common practice, especially at the Coatings-Group where equipment is easy to move. This is also illustrated by one of the 'priorities' that caused the delay in including the EVA calculation in the regular information system in Italy, where three production sites were added together to one.

Lately, a couple of units at Akzo have started a pilot by introducing activity-based costing in conjunction with EVA. To each activity a capital charge is included, to gain insight in the profitability of products and customers. However, at this stage it is more for their own information than that it is already used in decision making.

6.2. Heijmans

Although Heijmans introduced and adopted EVA, the drive adheres to growth and grow bigger, where economic value creation is only of secondary concern. Acquisitions are assessed in terms of payback period, development in price/earnings ratio, discounted cash flows, Goodwill/Intrinsic Value-ratio, and debt ratio (equity/debt). Foremost, the division executives told that the strategic value of the acquisition is probably most important.[8]

A former corporate controller said: 'Behavior does not really need to change, since the companies know very well how to make money.' He could imagine that the focus of an entrepreneur would shift from, for example, profits to working capital, but he stresses that it is certainly not the case that

the companies are currently doing a bad job, and would only start making money once managing on EVA. Besides, the former corporate controller stated that 'decisions regarding purchasing of equipment are not taken differently from before EVA was implemented, despite that as a result of EVA the costs of capital should be taken into account. Awareness is not yet that deeply rooted in the organization.' In that view, he added an important issue that operational management needs to be aware of the fact that the corporate shareholders also require a return, and that making a profit takes more than just earning the interest on debt. This is also illustrated by the fact that operating companies are not very willing and cooperating in sacrificing their autonomy, for example in favor of joint purchasing to cut costs.

It is remarkable, told the business unit director, that technically educated people who understand EVA are more aimed at finding solutions and being more proactive, compared to business-educated people who are more backward looking and can perfectly tell why something went wrong. Or, in his words: 'Business-educated people can tell you why a company went bankrupt, while technically schooled people try to avoid going bankrupt.'

Since the implementation of EVA in 1997, considerable time and effort was dedicated to make management aware of EVA and its drivers, said the Finance Director. However, throughout the years enthusiasm gradually declined since operational management considered it to be too complicated and as a consequence did not understand the model. The EVA calculations often resulted in discussions about the calculations, but not about setting EVA targets for next year and manage the drivers to realize that target. The focus remained on profits, and the capital base has not been reduced after the implementation of EVA.

The IFRS have had an enormous impact in fiscal year 2004, and this seriously delayed further developments in EVA. EVA has not yet been abandoned, but as a result of other priorities, like for instance the IFRS, only very little emphasis was put on this system.

The Finance Director is, however, personally inclined to put EVA back on the corporate agenda, though in a simplified form, related to management's requirements and depicting the system by means of a DuPont-chart. With EVA, he told, 'one language is spoken throughout the organization, which is crucial in having the model accepted.' Preferably, he feels that this simplified EVA should also be added to the 2008 targets. If it gets this far, quarterly reporting on EVA is within reach, contrary to the current situation of 'annual calculations without-questions-asked.'

6.3. Schiphol

At Schiphol, managing for value did not reduce investments, but 'did absolutely have an impact on investments, in the sense that motivation and discussions became much more profound,' as the corporate controller stated.

Unfortunately, at lower levels, the old culture of: 'it has always been possible, it is still possible, we need it, so let's buy it!' had been vivid for some years after implementation. However, 'even at levels where one would not expect it anymore decisions are made which not fully comply with VBM-principles, because certain aspects are overemphasized that are not supported by VBM,' told the former corporate controller. Both the former corporate controller as well as a business unit controller acknowledge that this change in culture needed time, certainly since it concerned a change due to the transition of a public body to a private company, and eventually listed company.

The cultural change that is effected is attributable to a combination of factors playing at the same time (e.g., rejuvenated attention for VBM, organizational restructuring, business process redesign, and a renewal/rejuvenation of management, who have been given the specific duty of effecting a cultural change). The business unit controller stated in this respect that 'although it cannot be solely attributed to VBM, but it probably will have helped, is that the organization became more businesslike and professional in its attitude. It turned into more target driven, more transparent (although still subject for improvement), and results driven.'

In business planning and budgeting neither the system nor periodicity have changed upon implementing VBM, but the contents of both business letters and budget letters are now based on VBM. Target setting is based on VBM, and control is aimed at meeting these (RONA) targets by means of the Diamond.[9]

VBM provides management with a complete management system, compared to a more fragmatic system that was used before. This increased view on management created a better awareness for RONA, and how activities and decisions have impact on the results. For example, for the Business Area Aviation it is clear that the focus must be on costs and investments, while for Consumers the focus is more aimed at the revenues side, like selling concessions, generate turnover (e.g., from parking fees), penetration degrees, and that Real Estate should focus on its unique location, and generate cash by letting the office buildings.

According to a former corporate controller, 'financial performance has certainly improved due to VBM.' However, the controller admits this is just a personal conviction, since 'it can never be proved because you will never know how it would have been without VBM.'

The effects are summarized in Appendix 5.

7. CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

When comparing the three organizations, some interesting differences appear. In this concluding section, I will focus on these differences and try to relate these to the differences in successful application of VBM.

7.1. Reasons

First, when looking at the reasons why these companies implemented VBM, although all three companies do mention that the capital markets had an important stake in deciding for managing for value, Akzo Nobel and Schiphol also considered non-financial aspects.

Akzo Nobel, for instance, intended to encourage entrepreneurial behavior as a result of the high level of autonomy of the business units. Having employees behave like owners, accomplishes the necessary change in mindset. Schiphol, on the other hand, was looking for a single management system to align internal and external reporting and control, instead of having different systems providing different information, that was until that time common practice in the various business units.

7.2. Implementation

With respect to the implementation, differences can, among others, be found in light of the calculations. Akzo Nobel uses EVA, with a uniform definition throughout the organization, and with a limited number of adjustments to operating profit and capital. Besides, they apply one corporate WACC. In addition, EVA is directly calculated from the information systems in place.

Heijmans has a corporate definition, but divisions adjusted this definition to their own situation, making figures incomparable. In addition, WACCs were initially calculated for each division, taking the different risk profiles into account. However, later it was decided, for reasons of simplicity, that these different WACCs were replaced with one corporate. Throughout the

organization, different information systems are in place as a result of the high number of acquisitions. These systems do not directly provide EVA information. Albeit that at corporate level the calculations were initially and intentionally held simple, the system evolved with an increasing complexity as a result of the fact that the divisions felt they needed to adjust the definitions to their own situation.

Schiphol followed a similar pattern like Heijmans regarding the WACC. Initially, the four business areas all had their own cost of capital, but later one corporate WACC was applied, with the exception of aviation as a result of legal requirements. Differences between the other BAs seemed to be too small, that it was decided to release these separate WACCs. As of 2005, due to the restructuring, the BAs were assigned specific WACCs again for internal purposes. Besides, the calculation of RONA/EP is directly linked with the information system in place.

7.3. Impact on Management Control System

Differences regarding implementation and control also appear in the extent to which the use of VBM stretches into the organization. At Akzo Nobel, VBM is a 'way of life' for all employees. All employees are familiar with EVA, although they are only held accountable for aspects they control. In that view, both financial and non-financial measures are used (e.g., by means of the Balanced Scorecard). Focus is not on managing EVA, but on how to manage the business to increase EVA (thus, on value drivers). In order to use EVA as a corporate language, Akzo Nobel created the position of EVA coordinator as 'one-stop-shop' to coordinate communication and initiate supporting tools throughout the organization. That way, implementation of VBM was streamlined compared to the initial efforts which resulted in a lack in communication between the BUs.

At Heijmans, implementation of VBM was also left to the divisions' management. However, the divisions were left full autonomy, e.g., in applicability of tools like the Balanced Scorecard or value trees. No inter-divisional coordination was at hand. Focus was on working capital, in addition to turnover and profit, and the extent to which VBM was used is restricted to higher and middle management. No one was actually held accountable for EVA performances; it was considered to be nothing more but a calculus exercise. Recently, operational measures are included in the control of divisions, albeit that EVA is not considered in these measures (based on net profit margin and ROI).

Schiphol implemented VBM centrally, and only a very limited number of managers was involved. Due to a legally required restructuring, resulting in a complex organizational structure with unclear responsibilities, use of VBM drifted away to a mere calculation for controllers. The Balanced Scorecard is used to express that managing for value reaches beyond financial metrics. Financial targets/indicators are set top-down in the organization, while operational targets/indicators are set bottom-up, ensuring they are in conjunction with each other. That way, all members in the organization are actually involved in and eventually contribute to creating value. Employees are only held accountable for the activities they control, which are included in the target setting. To align internal and external control, business units are abandoned as of 2005, and operational departments are univocally related to business areas.

7.4. Remuneration

Remuneration is another aspect on which the three companies differ. Akzo Nobel implemented EVA gradually throughout the organization, allowing people time to get accustomed to the managing for value principles. Remuneration followed a similar path: first the link with EVA performance was restricted to top management, while as of 2003 all Dutch employees have a link with EVA.

Heijmans had no remuneration policy based on performance, except for the board of management. However, no link was established with EVA or value creation.

Schiphol is extending its remuneration policy. Initially, only the Board of Management and business unit directors were held accountable for RONA/EP targets, which were subsequently linked to remuneration. As of 2004, the entire business unit management is held accountable for EP, and as of 2005 business areas, making it more profound that the entire management is responsible for achieving EP targets. This policy will in the next years be extended to lower levels.

7.5. Effects on Behavior, Decision Making and Performance

When looking at the effects, Akzo Nobel seems to have achieved the most. EVA introduced a consistent focus and common language, leading to a higher capital consciousness and consequently higher awareness for the balance sheet, e.g., in the effected site rationalizations and allocation of

resources, although the extent to which this is possible depends on a group's activities and legal requirements.[10]

Noting the executives interviewed, Heijmans achieved probably the least. EVA is not considered in investment proposals, and discussions often focus on the calculation rather than the drivers of value. Operational management considered EVA to be too complicated, which resulted in a gradually declining enthusiasm for using EVA. In addition, implementation of the IFRS also distracted attention of EVA. In the year 2005, the decision will be made to revitalize EVA, or abandon it.

Schiphol stands in between. After a good start, applying VBM in, for instance, investment proposals and introducing the Diamond to link non-financial measures (and lower-level employees) to value creation, the legal requirement of changing the organizational structure resulted in a hazy structure of responsibilities. Control was aimed at business units, while the business areas were the entities to create value, although these business areas were not formally managed. With the revitalization in 2003, as a result of the business process redesign to bridge the gap between business areas and business units, VBM again provides management with a complete management system, compared to the fragmental view as previously was the case. The effects of the 2005 abandoning of BUs are not clear yet, albeit that awareness grew of how activities and decisions have impact on RONA/EP in order to focus attention in managing the business.

Based on the cases described in this paper, it can be concluded that in applying an effective and efficient VBM system, the management control system needs alignment in setting targets, rewards and communication with value drivers, avoiding too much focus on VBM-calculations. The cases also show that VBM is not a style by itself, but comprises different tools to make it a system. In the case of Akzo Nobel, this is clearly illustrated by enhancing an entrepreneurial spirit. Employees are held accountable for the activities they control (e.g., using the Balanced Scorecard), they are encouraged to look forward by means of using rolling forecasts, and they are rewarded for achieving targets, all based on the drivers behind EVA as common nominator (using a value tree). Heijmans, on the other hand, still holds a strategic focus on traditional measures like turnover and profit, not holding people accountable for EVA. Focus is on working capital, as most important driver, but other drivers are basically neglected. Higher management admits that EVA never really gained foothold in the organization. For that reason, VBM can be considered to have failed. Schiphol, eventually, is with its revitalization of VBM back on track of making its management control

system 'compatible' with VBM, rather than manage for value without adapting the organization and control system, thus making the two 'not compatible.'

These cases provide some characteristics of how companies differ in implementing and applying VBM, and how they (failed to) adapt their management control system. Future research could be aimed at a more extensive sample of companies that manage for value, in order to confirm the findings from this study, since observations from three cases can by no means be generalized. Besides, another interesting subject to extend research to is how the entire supply chain can be involved in creating value on a larger scale, since current research is restricted to 'within-firm' capital-awareness and profit and loss account/balance sheet improvements.

NOTES

1. A 'value tree' is a system to depict the variables of economic profit into new variables that have impact on the former variable. It is comparable with the 'Dupont chart' for ROI. This way the variables can be broken down to the lowest level in the organization and can include both financial and non-financial variables. Rappaport (1998) speaks about 'macro' and 'micro' value drivers for referring to generic and operational value drivers.
2. AirportCity is a registered trademark by Schiphol Group.
3. Until today, the Dutch government still has not decided about a date for the privatization.
4. Heijmans won several awards for the strength of its investor relations policy, including the Sijthoff Award for its annual reports for 1996 and 2001. In 2003 Heijmans was awarded the Rematch Investor Relations Award in the AMX-stocks (Midkap) category.
5. The Diamond is, as of January 1, 2005, renamed to Balanced Scorecard.
6. Adapted in the sense that three separate Diamonds are aggregated to a single one, for comparative purposes.
7. However, a reduction in working capital is for a Group like Pharma hard to accomplish. The EVA coordinator told: 'First, this group is still very sales oriented, meaning that they accept high inventories to fulfill orders. Second, the cost of capital is too low compared to their returns. Their after-tax return is about 25%. Compared to a WACC of 9% this is very high, and as such the WACC provides less incentives to save on working capital than the fear of losing sales from out-of-stock situation, even though both drivers could be perfectly combined. Third, which is probably most evident, is that this industry is highly regulated. They cannot easily change their working environment, since everything (like e.g., the general manufacturing processes and general purchasing processes) is subject to strict guidelines. New production facilities/equipment and workflows are scrutinized by the US Food and Drug Administration (FDA), and for that reason it gives less opportunities to bring down inventories or working capital in general.'

8. The strategic value is a verbal essay that explains what the acquisition adds to the activity portfolio of a division.
9. See previous section on 'Value-based Management and the Management Control System.'
10. For example, Pharma is subject to requirements of the US Food and Drug Administration regarding production of pharmaceuticals.

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APPENDIX 1. REASONS FOR IMPLEMENTING VALUE-BASED MANAGEMENT

Akzo Nobel	• Pressure from capital markets • Encourage entrepreneurial behavior • Lagging share price compared to index
Heijmans	• Communication with stock market • Attention for working capital • Pressure from capital markets
Schiphol	• Decentralization and target setting • Privatization and consequent attention for shareholders' return • Desire for a single management system • Legal requirements by Dutch Competition Authority

APPENDIX 2. IMPLEMENTATION OF VALUE-BASED MANAGEMENT

Company (Year of Effective Implementation; Metric)	Characteristics
Akzo Nobel (2000; EVA – corporate WACC, about 4 adjustments)	• 1998: attention for capital • Jan 1, 2000: half-year pilot in one BU at each of three Groups • Jan 1, 2001: EVA up and running in all BUs • Training: 700–800 top managers • Objectives: change in mindset, create awareness for WACC, explain techniques (only financial management) • Initially: lack of communication between BUs as result of high level of autonomy • Due course 2001: introduction EVA coordinator • Supported by: Brochures, Intranet, EVA drivers game, value-seminars • Link with remuneration (initially senior management, as of 2003 all Dutch employees) • Focus: not EVA, but value drivers • 'EVA-award' for employee with most appealing EVA idea
Heijmans (1997; EVA – initially WACC per division, later corporate WACC, about 3 adjustments)	• Many acquisitions in 1996 – attention for capital • Company-wide implementation in 1997 • High level of decentralization; rolling out EVA to lower levels divisions' responsibility • Initially specific training higher management; as of 2000 incorporated in various training programs • 'EVA not an aim, but a means' – mindset instead of calculation • No company-wide ERP system to calculate EVA, to avoid impression that holding is 'owner' of EVA; nevertheless EVA seen as calculus-exercise

APPENDIX 2. (*Continued*)

Company (Year of Effective Implementation; Metric)	Characteristics
	• Corporate EVA definition, but divisions apply own definitions; no EVA below division-level • No link with remuneration
Schiphol (1999; RONA/EP – initially WACC per business area, later corporate WACC, 2005: BA-specific WACC for internal purposes, no adjustments)	• Preliminary project to look into VBM concluded in 1998 • Workshops with BU management to trace value drivers and develop value tree (with external consultants) • Company-wide implementation in 1999 • VBM as business tool rather than 'a calculation' • No formal training, except for management game (only for management) • VBM used in holistic way • As of 2000 attention for VBM drifted away due to complex organizational structure – EP only used by corporate controllers • In 2003 revitalization RONA/EP as result of BPR to bridge gap between BA and BU and renewed discussion about IPO[a] • Remuneration based on VBM-targets for Board of Management and BU management • No supportive materials provided; only discussed during courses (2005), sessions, management presentations, and 'conversations with the Board of Management' in case of lower management.

[a]On July 2, 2004, the Dutch government decided to sell a minority stake in the Schiphol group at a financially opportune time as long as public interest is adequately protected.

APPENDIX 3. ADAPTED DIAMOND FOR SCHIPHOL GROUP

Diamonds Group, BA and BU level	Schiphol Group	Business Area Consumers	Business Unit Passengers
Financial			
		Primary revenues	
	Revenues	Revenues	Revenues
	Expenses	Expenses	Expenses
	EBITDA	EBITDA	
	Operating result	Operating result	Operating result
	Net result		
	Average Fixed Assets	Average Fixed Assets	Average Fixed Assets
	RONA after tax	RONA after tax	RONA after tax
	WACC	WACC	
	Economic Profit	Economic Profit	
	Shareholders' equity		
	Total Assets		
	Development revenues (%)	Development revenues (%)	
	Development expenses (%)	Development expenses (%)	
(STB = Security duties civil aviation)	Development revenues excl. STB		
	Development expenses excl. STB		
	Interest Coverage Ratio		
	ROE		
	Leverage Book Value		
	Change in Working Capital		Change in Working Capital
	Cash Flow from Operations		
	Cash Flow from Investments	Cash flow from Investments	CF from Inv. Tangible Fixed Assets
(WLU = Workload unit)	Costs per WLU BA Aviation		
	Costs per WLU BA Aviation excl. STB		
(SBF = See Buy Fly)	Concession SBF per IDP	Concession SBF per IDP	
(IDP = Int'l Departing Passenger)		Parking per OD PAX	
(A/R = Accounts Receivable)			Average A/R days outstanding
			% accounts receivable > 60 days
			% accounts payable > 60 days

APPENDIX 3. (*Continued*)

Diamonds Group, BA and BU level	Schiphol Group	Business Area Consumers	Business Unit Passengers
Quality			
	Passengers (including transfer)	Passengers (including transfer)	Capacity leases
(OD = Origin Destination)	Departing OD passengers	Departing OD passengers	Availability flow installations terminal
	Departing Transfer passengers	Departing Transfer passengers	Flowspace Schengen
	Airplane movements		Flowspace Non-Schengen
(MTOW = Max Take-off Weight)	Average MTOW		
	Cargo		
(pax = passengers)	Mainport destination pax		
	Mainport destination cargo		
	Market share passengers Euro Top 5		
	Market share cargo Euro Top 5		
	Arrivals punctuality		
	Departures punctuality		
(IR = Irregularity Rate)	Bagage IR rate		Bagage IR rate
(CISS = Central Info Syst Schiphol)	Availability CISS		Oper. Availability bagage Central
	Satisfaction PAX airlines & handlers		Oper. Avail. bagage Mainlines D-pier
	Satisfaction arriving passengers	Satisfaction arriving passengers	Satisfaction arriving passengers
	Satisfaction departing passengers	Satisfaction departing passengers	Satisfaction departing passengers
	Price/Quality ratio SBF	Price/Quality ratio SBF	
	Buying penetration SBF	Buying penetration SBF	
		Shopping space per IDP	
		Price/Quality hotel/ catering	
		Satisfaction # facilities waiting	
	Price/Quality parking	Price/Quality parking	
	Max. capacity utilization short parking	Max. capacity utilization short parking	
	Max. capacity utilization long parking	Max. capacity utilization long parking	

APPENDIX 3. (*Continued*)

Diamonds Group, BA and BU level	Schiphol Group	Business Area Consumers	Business Unit Passengers
(SRE = Schiphol Real Estate)	Customer satisfaction lessees SRE		
	SRE occupancy rate total		
(VVO = floor area for rent)	SRE VVO total		
			Clientcontact CCC in time
(NS = Dutch Railways)			Pass. satisf'n waiting time filter NS-S
(S = Schiphol)			Pass. satisf'n waiting time filter S-NS
Sustainability & Innovation			
(Lden = Level day-evening-night)	Critical enforcement issues Lden		
(Lnight = Level night)	Critical enforcement issues Lnight		
	Personal safety perception		Personal safety perception
	Development new products	Development new products	Development new products
Employees & Organization			
	FTEs location Schiphol		FTEs
	Salaries and social security charges		Salaries and social security charges
	Outsourcing + ext. charges + consulting		Outsourcing + ext. charges + consulting
	Employee satisfaction		Employee satisfaction
	Annual evaluations		Annual evaluations
	Individual Development Plan (IOP)		Individual Development Plan (IOP)
	Absenteeism through illness		Absenteeism through illness

Note: NB with the restructuring of 2005, i.e., abandoning business units, BU indicators are included on BA level.

APPENDIX 4. CHARACTERISTICS OF VALUE-BASED MANAGEMENT AND MANAGEMENT CONTROL SYSTEM

Akzo Nobel	• Targets in EVA growth • BU apply quarterly rolling forecasts, 3 quarters ahead + 3-year strategic plan in October • Reporting focused on EVA, but supplemented with other ratios • Active management of product portfolio – if necessary divesting • Accountability and controllability to low levels • Investment proposals above EUR 80.000 subject to 'Project EVAluator tool' – positive EVA required, unless HSE[a] is involved • Both financial and non-financial performance indicators • Increasing use of 'Consignment Stocks' • International definitions of EVA-related terms • Better detailed financial overviews to trace back amounts • Allocation keys for indirect costs straightforward, but good insight into cost management
Heijmans	• Turnover and profit two key financial indicators • Management and employees not held accountable for EVA • No link between EVA and remuneration • Control focused on 'working capital' (components) instead of 'EVA' • Divisions full autonomy in applying instruments like BSC for executing strategy
Schiphol	• Diamond – including financial and non-financial measures on four perspectives • Indicators and control related to responsibility, accountability, and controllability • Financial indicators top-down, operational indicators bottom-up • Quarterly forecasting, 1-year operational plan in Fall, 5-year business plan (including investments) in Spring • BU RONA responsible, but P/L driven, budgets based on cost control • Until 2005 external and internal control not aligned due to difference between BA (reported in annual report) and BU (internal organization, based on processes) • As of 2005: BAs run by management, BUs abandoned • High number of internal and external interests to meet, as result of organizational social responsibility, makes control complex

[a]HSE: Health, Safety and Environment.

APPENDIX 5. EFFECTS OF VALUE-BASED MANAGEMENT

Akzo Nobel	• Consistent focus and common language • More attention to working capital • Employees more entrepreneurial • Capital consciousness and mindset changed • Working capital reduced – not always equally easy as result of Group-industry's characteristics • Allocation of resources beneficially for better EVA performers • Higher awareness Balance sheet, investment proposals harder accepted • Production and Site rationalization common practice, although depending on Group's activities • Pilot started in few BUs to introduce ABC in conjunction with EVA
Heijmans	• Investment proposals based on DCF, EPS and Payback period; not EVA • Frequent discussions on technical aspects EVA, instead of EVA targets and manage drivers • Changing focus from Profit to Capital took longer than expected • People take more initiatives and act more proactively • Operational management considers EVA to be too complicated, resulting in gradually declining enthusiasm • Despite attention EVA in annual reports, it never gained foothold in managing • 2005: New CEO set strategic targets in terms of net profit margin and ROI • Operational measures are included in control of divisions; divisions are managed more tightly and uniform by responsible member of Managing Board • Implementation of IFRS distracted attention from EVA
Schiphol	• Discussions about investments in business planning and budgeting more profound • Cultural change (from public body to private company) took time, but organization is becoming more businesslike and professional in attitude • Decisions are not always made in full compliance with VBM principles • Acquisitions of airports have been rejected as a result of VBM principles (RONA) • VBM provides management with a complete management system, compared to fragmental previously • Costs became more transparent and comparable between BUs • Greater awareness of how activities and decisions have impact on RONA/EP in order to focus attention